

REMARKS

Claims 1-20 are pending in the present application.

This Amendment is in response to the Office Action mailed September 22, 2009. In the Office Action, the Examiner rejected claims 1-4, 6-9, and 11 under 35 U.S.C. §102(b); and claims 5, 8-10, and 12-20 under 35 U.S.C. §103(a). Applicant has amended claim 1.

Reconsideration in light of the amendments and remarks made herein is respectfully requested.

Rejection Under 35 U.S.C. § 102

In the Office Action, the Examiner rejected claims 1, 2, 6, 7, and 11 under 35 U.S.C. §102(b) as being anticipated by JP Patent No. 61-056289 issued to Inoi et al. ("Inoi"); and claims 1-4, 6-9, and 11 under 35 U.S.C. §102(b) as being anticipated by Japanese Patent No. JP59-64786 issued to Yoshida ("Yoshida"). Applicant respectfully traverses the rejection and submits that the Examiner has not met the burden of establishing a *prima facie* case of anticipation.

1. Inoi – Claims 1, 2, 6, 7, and 11

Inoi does not disclose, either expressly or inherently, at least, "a second cell frame including an in-flow port... and an out-flow port, wherein both the in-flow port and out-flow port are placed along an outer perimeter of the second cell frame," as recited in amended independent claim 1.

Inoi merely discloses a cell with purported good accuracy and electric power efficiency by binding a mesh-type electrode for electrolysis bulged uniformly outward from the outside surface of a picture frame-shaped frame. As described in the brief "Constitution" section, Inoi appears to describe a cell for producing chlorine gas from caustic soda and brine. Anode and cathode bodies include passage holes 2, 3 for the anodes and cathodes and passage holes 4 for supplying dilute caustic soda and passage holes 5 for supplying brine. Communicating holes 6, 7 connect a central aperture 8 thereby constituting the ion exchange membrane method. As described "[t]he substantially entire surface of the above-mentioned electrode A of said device bulges uniformly outward from the outside surface of the frame A1 and the gasket Pm which has approximately the same shape as the shape of the frame A1 and the thickness larger than the bulging height of the electrode A1 is disposed between the electrode body and the membrane M."

The Examiner alleges that the frame A1 in Inoi corresponds to “the second cell frame” and communicating holes 7 and 6 correspond, respectively, to “the in-flow port” and “the out-flow port” (Office Action, page 3).

Applicant respectfully disagrees and submits that, as argued previously, the claims describe both the in-flow port and the out-flow port being placed along a perimeter of the second cell frame. As illustrated in Figures 2 and 3 and stated in the Specification, “an in-flow port 214 is positioned along a perimeter (e.g., side edge 211₁) of the cathode cell frame 210 near a bottom edge 213 of the cell frame 210 as shown in Figure 3... An out-flow port 216 is positioned at a side edge 211₂ near a top edge 215 of the cathode cell frame 210...” (See, Specification, pages 8-9, for further details).

As shown in Figure 2 of Inoi, the communicating holes 7 and 6 are located towards the inside of the frame A1 such that the holes 7 and 6 are not “placed along a perimeter” of the frame A1. In the Office Action, the Examiner alleges that holes “6 and 7 of Inoi... are at a perimeter of the cell frame. The claim language does not specify that the ports open to the outside of the cell frame, only that they are located on a perimeter” (Office Action, page 13-14). While Applicant disagrees with the Examiner’s construction of the term “perimeter,” in the interest of advancing prosecution of the present application, Applicant respectfully submits that claim 1 has been amended to recite: “wherein both the in-flow port and out-flow port are placed along an outer perimeter of the second cell frame.” Accordingly, Inoi fails to teach this element of amendment claim 1.

Applicant further submits that a *prima facie* case of anticipation has not been established for dependent claims 2, 6, 7, and 11. However, based on the dependency of claims 2, 6, 7, and 11 on independent claim 1, which is believed to be in condition for allowance, Applicant respectfully submits that claims 2, 6, 7, and 11 are believed to be allowable for at least the reasons set forth above.

2. Yoshida – Claims 1-4, 6-9, and 11

Similarly, Yoshida does not disclose, either expressly or inherently, at least, “a second cell frame including an in-flow port... and an out-flow port, wherein both the in-flow port and out-flow port are placed along an outer perimeter of the second cell frame,” as recited in amended independent claim 1.

As described in the brief "Constitution" section, Yoshida merely discloses porous anode flat plate 5 being arranged on both surfaces of a picture framed shaped anode chamber frame 1. The picture framed shaped anode chamber frame 1 is provided with an electrolyte supply nozzle 2 and an electrolyte and electrolytic product discharge nozzle 3 through gaskets 4 to form an anode unit 9. A cathode unit 10 has a similar structure.

In the Office Action, the Examiner alleges that the picture framed shaped anode chamber frame 1 in Yoshida corresponds to the "second cell frame" and the supply nozzle 2 and discharge nozzle 3 correspond, respectively, to the "in-flow port" and "out-flow port" (Office Action, page 8). Applicant respectfully disagrees and submits Yoshida merely provides that the frame 1 is provided with supply nozzle 2 and discharge nozzle 3, there is no teaching in Yoshida of the nozzles 2, 3 being placed along an outer perimeter of frame 1. Accordingly, the nozzles 2 and 3 cannot correspond to the "in-flow port" and "out-flow port," as recited in claim 1.

Additionally, claim 1 recites "the out-flow port positioned above the in-flow port." There is no teaching of discharge nozzle 3 being positioned above supply nozzle 2 such that Yoshida further fails to disclose this element of the claim.

Applicant further submits that a *prima facie* case of anticipation has not been established for dependent claims 2-4, 6-9, and 11. However, based on the dependency of claims 2-4, 6-9, and 11 on independent claim 1, which is believed to be in condition for allowance, Applicant respectfully submits that claims 2-4, 6-9, and 11 are believed to be allowable for at least the reasons set forth above.

To anticipate a claim, the reference must teach every element of a claim. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Vergegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the...claim." Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ 2d 1913, 1920 (Fed. Cir. 1989). Since the Examiner failed to show that Inoi and/or Yoshida teaches or discloses any of the above elements, the rejection under 35 U.S.C. § 102 is improper.

Therefore, Applicant believes that independent claims 1 and their respective dependent claims are distinguishable over the cited prior art references. Accordingly, Applicant respectfully requests the rejection under 35 U.S.C. §102(b) be withdrawn.

Rejection Under 35 U.S.C. § 103

In the Office Action, the Examiner rejected claims 5, and 14-18 under 35 U.S.C. §103(a) as being unpatentable over Inoi in view of article, "Newest News About Brown's Gas" ("Brown"); claims 8-10, and 19-20 under 35 U.S.C. §103(a) as being unpatentable over Inoi in view of U.S. Patent No. 5,783,051 issued to Hirai et al. ("Hirai") in further view of (with evidence from) Brown; claim 12 under 35 U.S.C. §103(a) as being unpatentable over Inoi in view of U.S. Patent No. 3,869,376 issued to Tejeda ("Tejeda"); claims 5, 10, and 13-18 under 35 U.S.C. §103(a) as being unpatentable over Yoshida in view of Brown"); claims 8-10, and 19-20 under 35 U.S.C. §103(a) as being unpatentable over Yoshidai in view of Hirai in further view of (with evidence from) Brown; and claim 12 under 35 U.S.C. §103(a) as being unpatentable over Yoshida in view of Tejeda. Applicant respectfully traverses the rejection and submits that the Examiner has not met the burden of establishing a *prima facie* case of obviousness.

To establish a *prima facie* case of obviousness, certain basic criteria must be met. For instance, the prior art reference (or references when combined) must teach or suggest all of the claim limitations. MPEP §2143. Applicant respectfully submits that the combined teachings do not address each and every limitation, and thus no *prima facie* case of obviousness has been established.

Furthermore, the Supreme Court in Graham v. John Deere, 383 U.S. 1, 148 USPQ 459 (1966), stated: "Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined." MPEP 2141. In KSR International Co. vs. Teleflex, Inc., 127 S.Ct. 1727 (2007) (Kennedy, J.), the Court explained that "[o]ften, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was

an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” Emphasis Added. The Court further required that an explicit analysis for this reason must be made. “[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” KSR, 127 S.Ct. at 1741, quoting In re Kahn, 441 F.3d 977, 988 (Fed. Cir. 2006).

In the instant case, Applicant respectfully submits that the combined teachings of the cited prior art references do not teach or suggest all the claim limitations. Furthermore, Applicant respectfully submits that there are significant differences between the cited references and the claimed invention and thus, there is no apparent reason to combine the known elements in the manner as claimed. No *prima facie* case of obviousness has been established.

The cited references, taken alone or in any combination, do not disclose or render obvious, at least, (1) “a second cell frame including an in-flow port... and an out-flow port, wherein both the in-flow port and out-flow port are placed along an outer perimeter of the second cell frame,” as recited in amended independent claim 1; and (2) “a first cell frame including a first compartment containing an anode,” as recited in independent claims 14 and 19.

1. Inoi

As discussed above, Inoi merely discloses the communicating holes 7 and 6 being located towards the inside of the frame A1 such that the holes 7 and 6 are not “placed along a perimeter” of the frame A1. Accordingly, Inoi fails to disclose “a second cell frame including an in-flow port... and an out-flow port, wherein both the in-flow port and out-flow port are placed along an outer perimeter of the second cell frame,” as recited in amended independent claim 1.

In addition, as noted above, Inoi teaches a cell wherein the substantially entire surface of electrode A of the device bulges uniformly outward from the outside surface of frame A1. Accordingly, frame A1 does not contain electrode A. The invention described in Inoi is directed at achieving the bulging. Thus, there is no teaching in Inoi of “a first cell frame including a first compartment containing an anode,” as recited in independent claims 14 and 19.

2. Yoshida

As discussed above, Yoshida merely discloses that the frame 1 is provided with supply nozzle 2 and discharge nozzle 3. Thus, there is no teaching in Yoshida of the nozzles 2, 3 being

placed along an outer perimeter of frame 1. Accordingly, Yoshida fails to disclose “a second cell frame including an in-flow port... and an out-flow port, wherein both the in-flow port and out-flow port are placed along an outer perimeter of the second cell frame,” as recited in amended independent claim 1.

Further, as above, Yoshida merely discloses porous anode flat plates 5 being arranged on both surfaces of an anode chamber frame 1. Applicant respectfully submits that there is no teaching of the frame 1 “including a first compartment containing an anode.” *Emphasis Added.* Accordingly, Yoshida fails to teach this element of independent claims 14 and 19.

Applicant further submits that a *prima facie* case of obviousness has not been established for dependent claims 5, 8-10, 12-13, 15-18, and 20. However, based on the dependency of claims 5, 8-10, 12-13, 15-18, and 20 on independent claims 1, 14, and 19, respectively, which is believed to be in condition for allowance, Applicant respectfully submits that claims 5, 8-10, 12-13, 15-18, and 20 are believed to be allowable for at least the reasons set forth above.

Therefore, Applicant believes that independent claims 1, 14, and 19 and their respective dependent claims are distinguishable over the cited prior art references. Accordingly, Applicant respectfully requests the rejection under 35 U.S.C. §103(a) be withdrawn.

Conclusion

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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